



**UNITED STATES DEPARTMENT OF COMMERCE**  
**United States Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

09/169,060 10/09/98 MUELLER

W 10191/822

026646  
KENYON & KENYON  
ONE BROADWAY  
NEW YORK NY 10004

MMC2/0712

EXAMINER

MEDLEY, F

ART UNIT

PAPER NUMBER

2834

DATE MAILED:

07/12/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

**Office Action Summary**

Application No.

09/169,060

Applicant(s)

MUELLER ET AL.

Examiner

Peter M Medley

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 April 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6,8-18,20-24 and 27-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11,12,23 and 24 is/are allowed.
- 6) ☒ Claim(s) 1-6,8-10,13-18,20-22 and 27-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 October 1999 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 19. 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the free wheeling diode and a short-circuiting transistor used together of claims 35 and 36 and the transistors coupled in series of claim 37 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 32 and 34-37 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

With respect to claims 32 and 34, the specification does not provide support for a further semiconductor **switching** device. The specification does disclose diodes coupled to transistors, but it does not disclose another switching device.

With respect to claims 35 and 36, the specification does not provide support for a free wheeling diode and a short-circuiting transistor used together.

With respect to claim 37, the specification does not support transistors coupled in series.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 29 is rejected under 35 U.S.C. 102(b) as being anticipated by Hamelin et al.

Hamelin discloses a rectifier and a plurality of transistors in **fig. 1**. The reference discloses in the discussion of **fig. 2** in the last paragraph of column 8 that the transistors act as a step-up converter.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6, 8-10, 13-18, 20-22, 30, 31, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamelin et al in view of Balogh.

Hamelin et al discloses a device and method for controlling a generator comprising a diode bridge and transistor **T** in **fig. 11**. The reference also teaches that the signal to the transistor can be varied in lines 25-40 of column 7. The reference also discloses a diode **D7**. Hamelin discloses a rectifier and a plurality of transistors in **fig. 1**

The reference discloses in the discussion of **fig. 2** in the last paragraph of column 8 that the transistors act as a step-up converter.

The reference does not disclose a smoothing capacitor or insulated gate bipolar transistor.

Balogh discloses that a "decoupling" capacitor **C** is used at the voltage detection point. One of ordinary skill in the art would recognize this as a smoothing capacitor. Balogh discloses using a smoothing capacitor for the purpose of isolating the load from fluctuations in the generator. It would have been obvious to one of ordinary skill in the art to use a smoothing capacitor for the purpose of isolating the load from fluctuations in the generator.

The court has found that the selection of a known material based on its suitability for its intended use is obvious. *In re Leshin*, 227 F.2d 197, 125 USPQ 416 (CCPA 1960). *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945). It would have been obvious to one of ordinary skill in the art to use insulated gate bipolar transistors for the purpose of utilizing their known electrical properties.

#### ***Allowable Subject Matter***

5. Claims 11, 12, 23, and 24 are allowed.

#### ***Response to Arguments***

6. Applicant's arguments filed 30 April 2001 have been fully considered but they are not persuasive.

With respect to the Drawings, the plurality of transistors connected in series to diodes is not shown in any of the drawings or mentioned in the specification.

With respect to §112 rejections, rejection of claims 11, 12, 23, and 24 has been withdrawn because parallel has been deleted in the claims. Rejection of claims 27 and 28 is also withdrawn. Rejection of claims 32 and 34-37 maintained.

With respect to claim 29 and the Hamelin et al reference, the Applicant argues that the reference does not show a step-function. Examiner disagrees: one of ordinary skill in the art would recognize that the configuration does provide a step-up function. The Comprehensive Dictionary of Electrical Engineering has been provided to show why the chopping and clipping disclosed in column 8 of the reference is for a step-up function. See **fig. 2** of Hamelin et al where the voltage is stepped up, the same way as disclosed by applicant.

With respect to claims 1-6, 8-10, 13-18, 20-22, and 30 and the Balogh reference, the Applicant argues that Balogh does not disclose a smoothing capacitor, but then the Applicant states that the function of the capacitor in Balogh is the same as a smoothing capacitor and then disputes that it is a smoothing capacitor. It is again suggested that the Applicant consider the Satoh et al and Balogh references, see **C** in both references.

### **Conclusion**

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

Art Unit: 2834


shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter M Medley whose telephone number is 703-305-0494. The examiner can normally be reached on Monday-Friday 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 703-308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3432 for regular communications and 703-305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

PM  
July 9, 2001

  
NESTOR RAMIREZ  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800